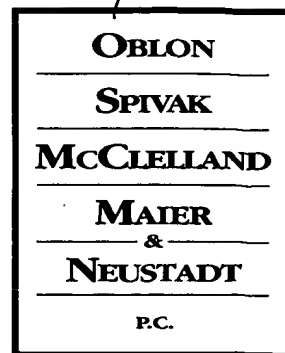




Docket No.: 209313US3PCT

COMMISSIONER FOR PATENTS  
ALEXANDRIA, VIRGINIA 22313



ATTORNEYS AT LAW

RE: Application Serial No.: 09/868,040  
Applicants: Kenichi OTANI, et al.  
Filing Date: July 23, 2001  
For: MOLDED ARTICLE  
Group Art Unit: 3727  
Examiner: MAI, T. M.

SIR:

Attached hereto for filing are the following papers:

**APPEAL BRIEF WITH APPENDIX I IN TRIPLICATE  
AMENDMENT IN TRIPLICATE**

Our credit card payment form in the amount of \$330.00 is attached covering any required fees. In the event any variance exists between the amount enclosed and the Patent Office charges for filing the above-noted documents, including any fees required under 37 C.F.R. 1.136 for any necessary Extension of Time to make the filing of the attached documents timely, please charge or credit the difference to our Deposit Account No. 15-0030. Further, if these papers are not considered timely filed, then a petition is hereby made under 37 C.F.R. 1.136 for the necessary extension of time. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.

J. Derek Mason

Registration No. 35,270

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**22850**

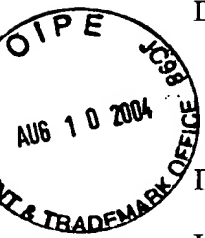
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DOCKET NO: 209313US3PCT

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF :  
KENICHI OTANI, ET AL. : EXAMINER: MAI, T. M.  
SERIAL NO: 09/868,040 :  
FILED: JULY 23, 2001 : GROUP ART UNIT: 3727  
FOR: MOLDED ARTICLE :

APPEAL BRIEF

COMMISSIONER FOR PATENTS  
ALEXANDRIA, VIRGINIA 22313

SIR:

This is an Appeal Brief from a Final Office Action mailed March 10, 2004. A Notice of Appeal was timely filed on June 10, 2004.

I. REAL PARTY IN INTEREST

The real party in interest in this appeal is Kao Corporation, having an address at 14-10 Nihonbashi Kayaba-cho 1-chome, Chuo-ku, Tokyo 103-8210, JAPAN.

II. RELATED APPEALS AND INTERFERENCES

The following appeals and interferences are presently pending on behalf of Kao Corporation. While Appellants do not believe that any of these appeals will directly affect, be directly affected by, or have a bearing on the Board's decision in this appeal, the following list is provided for the Board's reference:

**Application No's.**

08/606,838; 08/636,520; 08/683,188; 08/709,218; 08/734,263; 08/821,302;  
08/849,211; 09/220,691; 09/245,304; 09/291,329; 09/305,746; 09/341,706; 09/453,078;  
09/468,777; 90/005,740; 09/753,551; 09/783,548; 10/083,387; and 10/319,546.

**III. STATUS OF THE CLAIMS**

Claims 11-36 are pending in the application. Claims 13, 14, 16, and 18-34 are withdrawn from consideration, and Claims 11, 12, 15, 17, 35, and 36 stand finally rejected and are herein appealed.

**IV. STATUS OF THE AMENDMENTS**

An amendment to address a minor informality in Claim 11 is filed concurrently herewith. Because this amendment addresses the outstanding rejection of Claim 11 under 35 U.S.C. § 112, first and second paragraphs, and simplifies the issues for appeal, Appellants assume that the amendment filed herewith will be entered for purposes of appeal. A Notice of Appeal was timely filed on June 10, 2004. The attached Appendix I reflects Claims 11-36 as presently pending on appeal.

**V. SUMMARY OF THE INVENTION**

With reference to the figures, notably Figure 2, independent Claim 11 recites a molded article (10) made predominately of pulp and comprising: a bottom portion 13 and a body portion 12, wherein an angle  $\theta$  between an outer surface of a side wall of said body portion 12 and a ground contact plane of said bottom portion 13 is  $85^\circ$  or greater, said molded article is seamless, a height of said body portion is 50 mm or more, said molded article has

corners of a thickness T2 that is greater than a thickness T1 of a portion that is not one of said corners, and said thickness T2 continuously tapers into said thickness T1.

Similarly, with reference to Figure 2, Claim 12 recites a molded article (10) made predominately of pulp and comprising: a bottom portion (13); and a body portion (12), wherein an angle  $\theta$  between an outer surface of a side wall of said body portion (12) and a ground contact plane of said bottom portion (13) is  $85^\circ$  or greater, said molded article is seamless, and a height of said body portion (12) is 50 mm or more, and said molded article has corners of a density  $\rho_2$  that is smaller than a density  $\rho_1$  of a portion that is not one of said corners.

## VI. ISSUES

The first issue for review is whether one or more of Claims 11, 12, 15, 17, 35, and 36 are unpatentable over Kieckhefer (U.S. Pat. No. 2,530,124) or Clay (U.S. Pat. No. 2,042,210). The second issue for review is whether one or more of Claims 11, 12, 15, 17, 35, and 36 is unpatentable over either Kieckhefer or Clay in view of either Hatch (U.S. Pat. No. 2,738,914) or Taylor (U.S. Pat. No. 1,966,469).

## VII. GROUPING OF THE CLAIMS

For the first and second issues, Claims 11, 15, and 35 stand together and Claims 12, 17, and 36 stand together.

## VIII. ARGUMENT

### A. **The First Issue, Claims 11, 12, 15, 17, 35, and 36.**

The Final Office Action explicitly rejects Claims 11, 12, 15, 17, 35, and 36 as unpatentable over Kieckhefer or Clay.

Independent Claim 11 recites, in part, that an angle between an outer surface of a side wall of the body portion and a ground contact plane of the bottom portion is 85° or greater and that the molded article has corners of a thickness T2 that is greater than a thickness T1 of a portion that is not one of the corners. Independent Claim 12 recites, in part, that an angle between an outer surface of a side wall of the body portion and a ground contact plane of the bottom portion is 85° or greater and that the molded article has corners of a density  $\rho_2$  that is smaller than a density  $\rho_1$  of a portion that is not one of the corners.

As described in the specification, for example at page 6, the molded article 10 has such a drop strength that it does not break even when dropped ten times in the drop test specified in JIS Z0217. Additionally, the compressive strength (buckling strength) of the molded article 10 is improved when the molded article 10 has a larger thickness at the corners and its vertical cross-section and/or transfers cross-section than other portions of the body.<sup>1</sup>

1. **Kieckhefer Teaches Away From the Limitations of Claim 11**

As set forth in MPEP § 2141.03, the prior art must be considered in its entirety, including the disclosures that teach away from the claims.<sup>2</sup> It is respectfully submitted that this requirement has not been satisfied in this case.

Kieckhefer relates to a nested cup. Kieckhefer seeks to prevent stacked cups from becoming wedged together. To overcome this problem, Kieckhefer describes that the nesting engagement must be limited by contact between the walls and that the angularity of the walls must be such that the cups do not stack too closely.<sup>3</sup> The Office Action asserts at page 3 that it would have been obvious to one of ordinary skill in the art to provide an angle at 85° to provide the desired angle for the cup.

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<sup>1</sup> The Applicants filed a Declaration under 37 C.F.R. § 1.132 setting forth unexpected experimental results obtained through the claimed limitations. The Declaration is discussed *infra*.

<sup>2</sup> See, e.g., *W. L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 221 U.S.P.Q. 303 (Fed. Cir. 1983).

<sup>3</sup> Kieckhefer, col. 1, lines 15-20.

However, this modification is contrary to the teachings of Kieckhefer. Specifically, Kieckhefer teaches away from having an angle of 85° or greater between an outer surface of the side wall of the body and a ground contact plane of the bottom portion, as recited in Claim 11, because cups having a side wall angle of 85° or greater would stack too closely to prevent wedging. Therefore, as Kieckhefer teaches away from the limitations of Claim 11, it is respectfully submitted that Claim 11 patentably distinguishes over Kieckhefer. Likewise, dependent Claims 15 and 35 are believed to distinguish over Kieckhefer.

**2. Clay Does Not Teach the Limitations of Claim 11**

Clay relates to a composition tray. The Office Action states at page 3 that Figures 6 and 4 of Clay illustrate a pulp molded article having an angle of 85° or greater. However, no support may be found in the teachings of Clay for this assertion. In fact, the description of Figure 6 in Clay does not indicate any angle of the tray at all. While the Office Action asserts at page 3 that it would have been obvious to one of ordinary skill in the art to provide an angle at 85° in Clay to provide the desired angle for the tray, the Office Action cites no support for this assertion.

Thus, as Clay does not disclose or suggest the features of Claim 11, it is respectfully submitted that Claim 11 patentably distinguishes over Clay. Claims 15 and 35, which depend from Claim 11, are similarly believed to distinguish over Clay.

**3. Neither Kieckhefer nor Clay Teaches the Limitations of Claim 12**

As for Claim 12, the Office Action takes Official Notice at page 3 that the molded containers of Kieckhefer and Clay inherently have a density  $\rho_2$  smaller than a density  $\rho_1$  at portions 5 and 4 due to the molding process, but no teachings were cited in either reference to support that assertion. Appellants repeatedly requested that a reference be cited in support of that assertion.

As stated in MPEP § 2144.03, “Official notice without documentary evidence to support an Examiner’s conclusion is permissible only in some circumstances. While ‘official notice’ may be relied on the circumstances should be rare when an application is under final rejection.” Additionally, “it would not be appropriate for the Examiner to take official notice of facts without citing a prior art reference where the facts asserted to be well-known are not capable of instant and unquestionable demonstration as being well-known.” (emphasis in original). Moreover, “It is never appropriate to rely solely on ‘common knowledge’ in the art without evidentiary support in the record, as the principle evidence upon which a rejection was based.”<sup>4</sup> Finally, “If applicant adequately traverses the Examiner’s assertion of official notice, the Examiner must provide documentary evidence in the next Office action if the rejection is to be maintained.” See 37 C.F.R. § 1.104(c)(2).

Although the Appellants seasonably traversed the Official Notice in the Office Action dated January 16, 2003, no evidentiary support was ever supplied to the Appellants. Thus, it is respectfully submitted that the Office Action has failed to provide a *prima facie* case of obviousness with regard to Claims 12, 17, and 36.

**4. Experimental Results Provide Additional Evidence of Non-Obviousness, But Were Not Considered by the Examiner**

The Appellants filed a Declaration under 37 C.F.R. § 1.132 with a response filed November 7, 2003. As set forth in the Declaration, the thickness and density limitations recited in independent Claims 11 and 12, respectively, yield unexpected improvements in bottle performance. As further described in the Declaration, the Appellants have discovered that the claimed thickness and density ratios result in an expectedly large increase in bottle strength (both drop strength and compressive strength). During an interview on March 30, 2004, the Appellants’ representative explained to the Examiner the importance of these

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<sup>4</sup> *Zurko*, 258 F.3d at 1385, 59 U.S.P.Q.2d at 1697.

unexpected results. The Examiner indicated during the interview that he was unwilling to consider the experimental results.

**B. The Second Issue, Claims 11, 12, 15, 17, 35, and 36.**

The outstanding Office Action rejects Claims 11, 12, 15, 16, 35, and 36 under 35 U.S.C. § 103(a) as unpatentable over either Kieckhefer or Clay in view of either Hatch or Taylor.

At the outset, in order to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.<sup>5</sup> Additionally, “[t]he teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant’s disclosure.”<sup>6</sup> Appellants submit that at a minimum, the first two requirements have not been satisfied in this case.

As noted above, neither Kieckhefer nor Clay discloses or suggests the features recited in Claims 11 and 12. It is respectfully submitted that Hatch and Taylor do not remedy the deficiencies identified with respect to Kieckhefer and Clay.

**1. Kieckhefer Is Not Properly Combinable With Hatch**

With regard to the applied combination of Kieckhefer and Hatch, it is respectfully noted that Kieckhefer teaches away from the applied combination with Hatch. Specifically, Kieckhefer, as noted above, describes that the wall angle of the nested cups must be such that the cups are not too closely stacked together. From this description, it is evident that Kieckhefer teaches away from an angle between an outer surface of a side wall body portion

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<sup>5</sup> See, MPEP § 2143.

<sup>6</sup> *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991).



and a ground contact plane of the bottom portion being 85° or greater, as recited in Claims 11 and 12. Therefore, combining Kieckhefer with Hatch is contrary to the teachings of these references, and is impermissible.

**2. The Combination of Kieckhefer and Taylor Does Not Teach the Limitations of Claims 11 and 12**

Regarding the applied combination of Kieckhefer and Taylor, it is respectfully submitted that neither Kieckhefer nor Taylor discloses or suggests the claimed angle between an outer surface of a side wall of the body portion and a ground contact plane of the bottom portion being 85° or greater, as recited in Claims 11 and 12. More specifically, there is no written description of an angle between an outer surface of a side wall of the body portion and a ground contact plane of the bottom portion being 85° or greater within Taylor. Additionally, there is no disclosure or suggestion of a decreased density at the corners in either Kieckhefer or Taylor, as recited in Claim 12.

**3. The Combination of Clay and Hatch Does Not Teach the Limitations of Claims 11 and 12**

As for the combination of Clay with Hatch, even if these two references were combined, there is no teaching regarding the increased thickness and the decreased densities at corner portions, as recited in Claims 11 and 12, respectively.

**4. The Combination of Clay and Taylor Also Fails to Teach the Limitations of Claims 11 and 12**

Likewise, with regard to the applied combination of Clay and Taylor, there is no disclosure or suggestion in either reference regarding the increased thickness or decreased density at the corners, as recited in Claims 11 and 12, respectively. Moreover, there is no disclosure or suggestion in the applied combination of Clay and Taylor that an angle between an outer surface of a side wall of the body portion and a ground contact plane of the bottom portion is 85° or greater, as recited in Claims 11 and 12.

**5. None of the References Suggest the Improvements Found in the Present Invention as Shown in the Rule 1.132 Declaration Filed November 7, 2003**

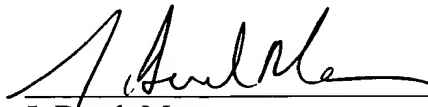
Even if the Examiner's combination of Kieckhefer and Clay with either of Hatch or Taylor is held to present a *prima facie* case of obviousness, the data provided in the Rule 1.132 Declaration filed November 7, 2003 show a significant shift (improvement) in bottle strength due to the thickness and/or density requirements of the present claims that is nowhere suggested by the cited references. Further, this increase is not merely a monotonic result effective variable, but rather shows a step-change type of increase as one moves into the claimed subject matter.

**IX. CONCLUSION**

Appellants submit that the applied references neither disclose nor suggest the molded article of Claims 11, 12, 15, 17, 35, and 36, nor the significant improvements in bottle strength found in the present invention. Accordingly, it is respectfully requested that all rejections still pending in the Final Office Action be REVERSED.

Respectfully submitted,

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APPENDIX I

11. A molded article made predominantly of pulp and comprising:

bottom portion;

and a body portion,

wherein an angle between an outer surface of a side wall of said body portion and a ground contact plane of said bottom portion is  $85^{\circ}$  or greater, said molded article is seamless, a height of said body portion is 50 mm or more, said molded article has corners of a thickness T2 that is greater than a thickness T1 of a portion that is not one of said corners, and said thickness T2 continuously tapers into said thickness T1.

12. A molded article made predominantly of pulp and comprising:

a bottom portion; and

a body portion,

wherein an angle between an outer surface of a side wall of said body portion and a ground contact plane of said bottom portion is  $85^{\circ}$  or greater, said molded article is seamless, a height of said body portion is 50 mm or more, and said molded article has corners of a density  $\rho_2$  that is smaller than a density  $\rho_1$  of a portion that is not one of said corners.

13. A molded article made predominantly of pulp and comprising a bottom portion, a body portion and an opening portion, wherein said body portion has a depression or a projection, or said opening portion has an extension extending inward from a peripheral edge thereof, said depression or said projection is continuous only in a horizontal or oblique direction provided that said depression or said projection is continuous in a straight line, said body portion is seamless, and said molded article has corners whose thickness T2 is greater than a thickness T1 of other portions.

14. A molded article made predominantly of pulp and comprising a bottom portion, a body portion and an opening portion, wherein said body portion has a depression or a projection, or said opening portion has an extension extending inward from a peripheral edge thereof, said depression or said projection is continuous only in a horizontal or oblique direction provided that said depression or said projection is continuous in a straight line, said body portion is seamless, and said molded article has corners whose density  $\rho_2$  is smaller than a density  $\rho_1$  of other portions.

15. The molded article according to claim 11, wherein  $T_1$  is 0.1 mm or more, and  $T_2/T_1$  is 1.5 to 2.

16. The molded article according to claim 13, wherein  $T_1$  is 0.1 mm or more, and  $T_2/T_1$  is 1.5 to 2.

17. The molded article according to claim 12, wherein  $\rho_1$  and  $\rho_2$  satisfy a relationship  $0.1 \times \rho_1 < \rho_2 < \rho_1$ .

18. The molded article according to claim 14, wherein  $\rho_1$  and  $\rho_2$  satisfy a relationship  $0.1 \times \rho_1 < \rho_2 < \rho_1$ .

19. The molded article according to claim 11, further comprising a lid for opening and closing said opening portion of said molded article and/or a measuring container, said lid and/or said measuring container being linked with said molded article by integral molding via a first hinge and/or a second hinge which is/are thin and dense.

20. The molded article according to claim 12, further comprising a lid for opening and closing said opening portion of said molded article and/or a measuring container, said lid and/or said measuring container being linked with said molded article by integral molding via a first hinge and/or a second hinge which is/are thin and dense.

21. The molded article according to claim 13, further comprising a lid for opening and closing said opening portion of said molded article and/or a measuring container, said lid and/or said measuring container being linked with said molded article by integral molding via a first hinge and/or a second hinge which is/are thin and dense.

22. The molded article according to claim 14, further comprising a lid for opening and closing said opening portion of said molded article and/or a measuring container, said lid and/or said measuring container being linked with said molded article by integral molding via a first hinge and/or a second hinge which is/are thin and dense.

23. The molded article according to claim 11, further comprising a lid for opening and closing said opening portion of said molded article, said lid being a part prepared separately from said molded article and fixed to said molded article by a linking part having a hinge, said linking part being provided on said lid.

24. The molded article according to claim 12, further comprising a lid for opening and closing said opening portion of said molded article, said lid being a part prepared separately from said molded article and fixed to said molded article by a linking part having a hinge, said linking part being provided on said lid.

25. The molded article according to claim 13, further comprising a lid for opening and closing said opening portion of said molded article, said lid being a part prepared separately from said molded article and fixed to said molded article by a linking part having a hinge, said linking part being provided on said lid.

26. The molded article according to claim 14, further comprising a lid for opening and closing said opening portion of said molded article, said lid being a part prepared separately from said molded article and fixed to said molded article by a linking part having a hinge, said linking part being provided on said lid.

27. The molded article according to claim 11, further comprising a plastic layer formed on the outer and/or the inner surfaces of said molded article by vacuum forming or pressure forming, and said plastic layer is obtainable by laminating a plastic film on said molded article while said molded article is heated to a predetermined temperature.

28. The molded article according to claim 12, further comprising a plastic layer formed on the outer and/or the inner surfaces of said molded article by vacuum forming or pressure forming, and said plastic layer is obtainable by laminating a plastic film on said molded article while said molded article is heated to a predetermined temperature.

29. The molded article according to claim 13, further comprising a plastic layer formed on the outer and/or the inner surfaces of said molded article by vacuum forming or pressure forming, and said plastic layer is obtainable by laminating a plastic film on said molded article while said molded article is heated to a predetermined temperature.

30. The molded article according to claim 14, further comprising a plastic layer formed on the outer and/or the inner surfaces of said molded article by vacuum forming or pressure forming, and said plastic layer is obtainable by laminating a plastic film on said molded article while said molded article is heated to a predetermined temperature.

31. The molded article according to claim 27, wherein said plastic film is preliminarily stretched prior to lamination.

32. The molded article according to claim 28, wherein said plastic film is preliminarily stretched prior to lamination.

33. The molded article according to claim 29, wherein said plastic film is preliminarily stretched prior to lamination.

34. The molded article according to claim 30, wherein said plastic film is preliminarily stretched prior to lamination.

35. The molded article according to Claim 11, wherein said molded article has corners of a density  $\rho_2$  that is smaller than a density  $\rho_1$  of a portion that is not one of said corners.

36. The molded article according to Claim 12, wherein said molded article has corners of an approximately uniform thickness  $T_2$  that is greater than a thickness  $T_1$  of a portion that is not one of said corners, and

said thickness T2 continuously tapers into said thickness T1.